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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/514,577	02/28/2000	Fang Wu	3871	9020

22434 7590 10/22/2003

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EXAMINER
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JONES, PRENELL P

ART UNIT	PAPER NUMBER
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2667

DATE MAILED: 10/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
09/514,577

Applicant(s)  
Wu et al.

Examiner  
Prenell Jones

Art Unit  
2667



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Aug 4, 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-15 is/are allowed.
- 6) ☒ Claim(s) 16, 17, 24, and 25 is/are rejected.
- 7) ☒ Claim(s) 18-23 is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell Jones whose telephone number is (703) 305-0630. The examiner can normally be reached on Monday thru Friday from 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (703) 305-4378. The fax phone number for the organization where this application or proceeding is assigned is (703) 873-9314

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Prenell Jones

October 9, 2003

  
CHI PHAM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

10/17/03

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***Claim Objections***

1. Claims 18 and 19 are objected to because of the following informalities: Regarding claim 18, line 3, “whether there *is a another channels* having” and regarding claim 19, line 1, “video *date* of claim”, Examiner questions it Applicant has left out words or added words which were not intended. Appropriate correction is required.

***Claim Rejections - 35 U.S.C. § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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3. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kidder in view of Choi et al, Keesman et al and Kaye et al.

Regarding claim 16, Kidder discloses processing video/audio data and channels, (col. 5, line 25 thru col. 6, line 47, col. 7, line 5-59) sum of the bit-rates equal the maximum effective transmission bandwidth (channel capacity) and multiple audio/visual channels and associated bit streams. Kidder is silent on determining if the sum of bit rates is greater than channel capacity and reducing bit rate if for a selected channel if the selected channel has a bit rate greater than the minimum bit rate for the channel. In analogous art, Choi discloses (Abstract, col. 1, line 59 thru col. 3, line 41, col. 5, line 7-21, col. 6, line 7-67) a encoding multiple video programs wherein there exists a sum of the bit rates of multiple the video programs (channel signals), bitstreams at a high bit rate produces many cell losses, use efficiency of channel is decreased, sum of bit rates of video programs has to be less than channel bandwidth (channel capacity), sum of bit rates has to be larger than the CBR (selective channel) channel bandwidth, if sum of bit rate is larger than CBR channel bandwidth (selective channel) information is loss, Kaye discloses (Abstract, Fig. 5, col. 8, line 29 thru col. 9, line 67, col. 10, line 7-49) bit rate allocation in a multi-channel video system that includes determining the bit rate of each channel and sum of bit rate is the amount of the channel bandwidth, minimum/maximum bit rate values, adjusting bit rates, Keesman discloses (Abstract) video signal encoding associated with multiple video channels, (col. 3, line 24 thru col. 6, line 35) maximum/minimum bit rate associated with selected channel and varying

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bit rates. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have been motivated to implement varying/adjusting bit rates of selected channels associated in a multiple video channel environment as taught by Keesman with the combined teachings of Kidder, Choi and Kaye for the purpose of managing the transmission/processing of data and to reduce/minimize/eliminate cell loss which inadvertently provides for a clear video image video data.

Regarding claim 24 and 25, as indicated above, Keesman discloses (Abstract) video signal encoding associated with multiple video channels, (col. 3, line 24 thru col. 6, line 35) maximum/minimum bit rate associated with selected channel and varying bit rates. He further discloses (col. 3, line 46 thru col. 6, line 35) selection of packets and associated bit rates and packet selection calculation associated with packets per buffer (table), scheduled buffer size (table size) and total bandwidth.

4. Claims 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kidder in view of Choi et al, Keesman et al and Kaye et al as applied to claim 16 above, and further in view of Quay et al.

Regarding claim 17, as indicated above, Kidder discloses processing video/audio data and channels, (col. 5, line 25 thru col. 6, line 47, col. 7, line 5-59) sum of the bit-rates equal the

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maximum effective transmission bandwidth (channel capacity) and multiple audio/visual channels and associated bit streams, Choi discloses (Abstract, col. 1, line 59 thru col. 3, line 41, col. 5, line 7-21, col. 6, line 7-67) a encoding multiple video programs wherein there exists a sum of the bit rates of multiple the video programs (channel signals), bitstreams at a high bit rate produces many cell losses, use efficiency of channel is decreased, sum of bit rates of video programs has to be less than channel bandwidth (channel capacity), sum of bit rates has to be larger than the CBR (selective channel) channel bandwidth, if sum of bit rate is larger than CBR channel bandwidth (selective channel) information is loss, Kaye discloses (Abstract, Fig. 5, col. 8, line 29 thru col. 9, line 67, col. 10, line 7-49) bit rate allocation in a multi-channel video system that includes determining the bit rate of each channel and sum of bit rate is the amount of the channel bandwidth, minimum/maximum bit rate values, adjusting bit rates, Keesman discloses (Abstract) video signal encoding associated with multiple video channels, (col. 3, line 24 thru col. 6, line 35) maximum/minimum bit rate associated with selected channel and varying bit rates. Kidder, Choi, Keesman and Kaye are all silent on scheduling data for transmission. In analogous art, Quay discloses (Abstract, col. 3, line 18 thru col. 4, line 67) scheduling and processing data associated with an ATM system regardless of data type (i.e., voice, data or video), (col. 10, line 13-67) sum of bit rate of the total bandwidth (channel capacity), scheduling of bandwidth/channels, and (col. 12, line 28-67) channels scheduled according to time-stamps for ATM transmission. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have been motivated to implement scheduling data for transmission

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with respect in a multiple video channel environment as taught by Quay with the combined teachings of Kidder, Choi, Keesman and Kaye for the purpose of managing the transmission/processing of data and to reduce/minimize/eliminate contention in a video communication environment.

*Allowable Subject Matter*

5. Claims 1-15 are allowed over prior art.

6. The following is a statement of reasons for the indication of allowable subject matter:

As indicated in the previous office action claims 1-15 and 18-23 contain allowable subject matter as stated below;

Regarding claim 1, the limitation, “a device performing statistical re-multiplexing of digital video signals wherein a second de-multiplexer re-coding an input signal in response to a second control signal received at the control port, the data input of the second de-multiplexer coupled to receive a second channel of data, the control port of the second de-multiplexer coupled to the second control port of the scheduler” is absent from the art. Claims 2-15 depend on claim 1, therefor, claims 2-15 are allowed for the same reason that claim 1 is allowed.



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7. Claims 18 thru 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 18, the limitation “determining whether there is another channel bit rate greater than its minimum and performing rate conversion if there is no channels having a bit rate greater than its minimum” is absent from the art. Claim 23 depends on claim 18, therefore, claim 23 is objected as well.

Regarding claim 19, the limitation “determining whether the selected channel has a bit rate close to the minimum bit rate for the channel and increasing the bit rate for the channel if it is determined that the selected channel has a bit rate close to the minimum bit rate for the channel” is absent from the art. Claims 20 and 21 depend on claim 19, therefore, claims 20 and 21 are objected to as well.

Regarding claim 22, the limitation “at least one of the plurality of channels of bit streams is a data stream that is buffered and not recoded” is absent from the art.